REMARKS

Claims 1-19 are pending in this application. By this Amendment, claims 1 and 3 are amended, and claims 12-19 are added. Claim 1 is amended to recite features supported in the specification on page 9, line 30 – page 10, line 3 and page 10, lines 25-36. Claim 12 is added to recite features supported in the specification on page 16, lines 3-24. Claims 13-19 are added to depend from claim 12. No new matter is added by any of these amendments.

Applicants gratefully acknowledge that claims 3-5 contain allowable subject matter. As such, Applicants amend claim 3 into independent form to recite the features of claim 1. However, Applicants assert that all of claims 1-19 are allowable for the reasons discussed below.

Reconsideration based on the following remarks is respectfully requested.

I. The Drawings Satisfy All Formal Requirements

The Office Action recommends filing formal drawings. However, formal Drawings were filed with the original application. Thus, Applicants believe that a form paragraph was used that is not applicable to this application.

II. Claims 1, 2 and 6-19 Define Patentable Subject Matter

The Office Action rejects claims 1, 2 and 6-11 under 35 U.S.C. §102(b) over U.S. Patent 5,473,890 to Takeshima *et al.* (hereinafter "Takeshima"). This rejection is respectfully traversed. Additionally, Applicants respectfully assert that added claims 12-19 are patentable over Takeshima as well.

Takeshima fails to teach or suggest an exhaust emission purification device for an internal combustion engine, including a sulfur component holding agent arranged in the exhaust path of the internal combustion engine for holding a sulfur component, a NO_x holding agent arranged downstream of the sulfur component holding agent in the exhaust gas for holding NO_x and the sulfur components when the air-fuel ratio of the exhaust gas flowing

thereinto is lean, and reducing agent adding means disposed between said sulfur component holding agent and said NO_x holding agent, the reducing agent adding means for adding a reducing agent to the exhaust gas flowing into the NO_x holding agent, wherein the concentration of the sulfur component in the reducing agent added by the reducing agent adding means is lower than the concentration of the sulfur component in the fuel supplied to a combustion chamber of the internal combustion engine, as recited in claim 1.

For example, the specification, at pages 9 and 10, discloses various exemplary aspects in which the reducing agent adding means (70) is arranged between the sulfur component holding agent (61) and the NO_x holding agent (62), *i.e.*, downstream of the sulfur component holding agent (61). In the case where the reducing agent adding means (70) is disposed upstream of the sulfur component holding agent (61), the sulfur component in the reducing agent added by the reducing agent adding means (70) is held by the sulfur component holding agent (61). Thus, Applicants' claimed features eliminate the necessity to use a reducing agent having a low sulfur component concentration. Therefore, claim 1 is directed to the reducing agent adding means (70) being downstream of the sulfur component holding agent (61) and immediately upstream of the NO_x holding agent (62).

Moreover, Takeshima does not teach or suggest the exhaust emission purification device, further including a bypass for bypassing the NO_x holding agent and a flow rate regulation valve for controlling the flow rate of the exhaust gas flowing into the bypass, wherein the sulfur component holding agent holds the sulfur component in the exhaust gas flowing thereinto in the case where the sulfur component holding conditions are satisfied, and releases the sulfur component held thereby in the case where the sulfur component releasing conditions are satisfied, and the sulfur releasing conditions are caused to be satisfied and the greater part of the exhaust gas flows into the bypass in the case where the sulfur component is released from the sulfur component holding agent, as recited in claim 2. In particular,

Applicants' claimed features provide for the greater part of the exhaust gas bypassing the NO_x holding agent when the sulfur component is released from the sulfur component holding agent, and thereby mitigates sulfur poisoning of the NO_x holding agent.

Also, Takeshima does not teach or suggest an exhaust emission purification device including exhaust emission purification device for an internal combustion engine, including a sulfur component holding agent arranged in the exhaust path of the internal combustion engine for holding a sulfur component when an air-fuel ratio is lean or substantially stiochiometric or rich with a temperature of the sulfur component holding agent being below a sulfur component releasing temperature, and for releasing the sulfur component when the air-fuel ratio of the exhaust gas is rich and the temperature exceeds the releasing temperature, NO_x holding agent arranged downstream of the sulfur component holding agent in the exhaust gas for holding NO_x and the sulfur components when the air-fuel ratio of the exhaust gas flowing thereinto is lean, and a reducing agent adding means for adding a reducing agent to the exhaust gas flowing into the NO_x holding agent, wherein the concentration of the sulfur component in the reducing agent added by the reducing agent adding means is below the concentration of the sulfur component in the fuel supplied to a combustion chamber of the internal combustion engine, as recited in added claim 12.

Instead, Takeshima discloses a NO_x absorbent 19 and a SO_x absorbent 18 from an exhaust port 17 for an internal combustion engine 1. In particular, Takeshima teaches absorbing and releasing NO_x under lean air-fuel ratio and lowered exhaust oxygen, respectively. Also, Takeshima teaches absorbing and releasing SO_x under lean and rich air-fuel ratios, respectively. In addition, Takeshima teaches a feeding valve 60 for adding reducing agent (col. 10, lines 15-22, col. 11, lines 17-38 and Fig. 10 of Takeshima).

Further, Takeshima further teaches a switch valve 27 to divert flow from the NO_x absorbent 19 and through a bypass 24 while the SO_x absorbent 18 releases the sulfur oxides (col. 19, lines 25-53, col. 23, lines 34-62 and Fig. 23 of Takeshima).

Thus, there is no teaching or suggestion in Takeshima of releasing the sulfur component under rich air-fuel ratio with the temperature exceeding the releasing temperature, and holding the sulfur component otherwise. These reasons also apply by extension to claims 2 and 6-11 based on their dependence from claim 1, and to claims 13-19 based on their dependence from claim 12.

A claim must be literally disclosed for a proper rejection under §102. This requirement is satisfied "only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference" (MPEP §2131). Applicants assert that the Office Action fails to satisfy this requirement with Takeshima.

For at least these reasons, Applicants respectfully assert that independent claim 1 is now patentable over the applied reference. Dependent claims 2 and 6-11 are likewise patentable over the applied reference for at least the reasons discussed as well as for the additional features they recite. Consequently, all the claims are in condition for allowance. Thus, Applicants respectfully request that the rejection under 35 U.S.C. §102 be withdrawn.

III. Conclusion

In view of the foregoing amendments and remarks, Applicants respectfully submit that this application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.

Should the Examiner believe that anything further is desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact Applicants' undersigned representative at the telephone number listed below.

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